

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

Solas OLED Ltd., an Irish corporation,

Plaintiff,

vs.

Samsung Display Co., Ltd., a Korean corporation,
Samsung Electronics Co., Ltd., a Korean
corporation, and Samsung Electronics America, Inc.,
a New York corporation,

Defendants.

CASE NO. 2:19-cv-152-JRG

JURY DEMANDED

**PLAINTIFF SOLAS OLED (“SOLAS”) LTD.’S OPENING CLAIM CONSTRUCTION
BRIEF**

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I. INTRODUCTION

Solas and Defendants offer not just competing claim-construction proposals, but very different approaches to claim construction. The Federal Circuit has set forth straightforward rules to guide claim construction. For example, where claim terms have a plain and ordinary meaning to a person of ordinary skill in the technical art, there is a heavy presumption that meaning applies.

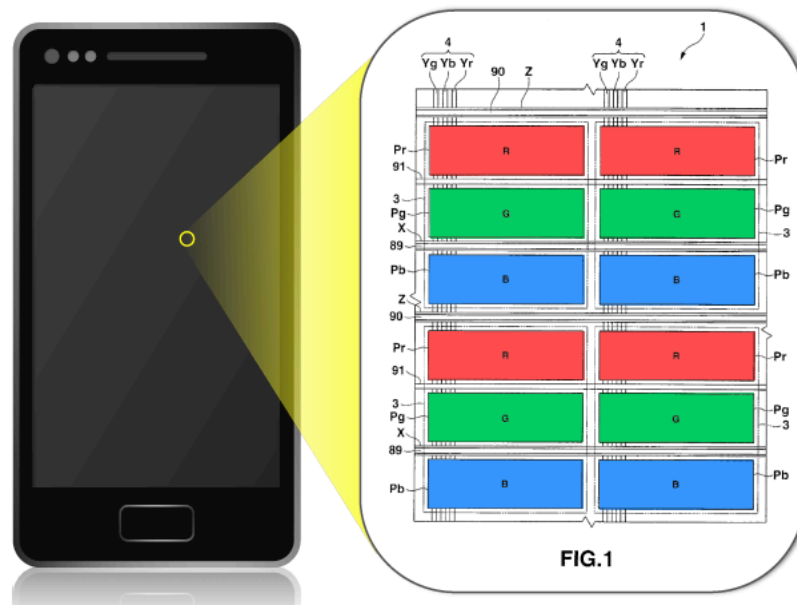
In each case, Solas's claim term proposals stay faithful to that plain meaning and narrow from that plain meaning only when necessary under controlling Federal Circuit law or when helpful to narrow the disputes for the Court. Solas's proposals are also the only ones that are faithful to the full scope of the intrinsic record—and the only ones that are supported by expert opinion on what a person of skill in the art would understand the terms to mean in light of the intrinsic and extrinsic record.

The Samsung Defendants ("Samsung" or "Defendants") proposals, on the other hand, ask this Court to recharacterize and burden clear terms with artificial and extraneous baggage, but Defendants cannot point to any clear or unmistakable disclaimer or lexicography to support these proposals. This invites reversible error. *E.g.*, *JVW Enters. v. Interact Accessories, Inc.*, 424 F.3d 1324, 1335 (Fed. Cir. 2005). Indeed, many of Defendants' proposals are inconsistent with—and even exclude—embodiments taught in the specification. Such constructions are "rarely, if ever, correct." *SanDisk Corp. v. Memorex Prods.*, 415 F.3d 1278, 1285-86 (Fed. Cir. 2005). For other proposals, Defendants' proposed constructions are inconsistent with the claim language itself. These are also improper under controlling law—and do nothing to help any fact-finder, but rather only make that job more difficult. Defendants' legally flawed and results-oriented proposals should be rejected.

II. BACKGROUND OF THE PATENTS-IN-SUIT

A. U.S. Patent No. 7,446,338 (“the ’338 patent”)

The '338 patent concerns display panels with light-emitting elements, such as organic electroluminescent display panels. (Ex. 2, '338 patent at 1:14–21.) A commonly used organic electroluminescent display technology is the organic light emitting diode, or OLED. OLED display panels are currently used in high-end mobile phones, watches, televisions, and other products from a number of manufacturers.



Displays used in phones, watches, televisions, etc. contain a two-dimensional array of picture elements, commonly called pixels, that can each be controlled to produce a desired color and brightness of light. Together, these pixel form the desired image on the display. Each pixel is typically made up of a number of sub-pixels, commonly in colors red, green, and blue, corresponding to the three colors visible to most human eyes. By controlling the brightness of each sub-pixel, the brightness and color of an overall pixel can be controlled. An example of this layout of sub-pixels is shown in the below annotated depiction of Figure 1 of the patent:

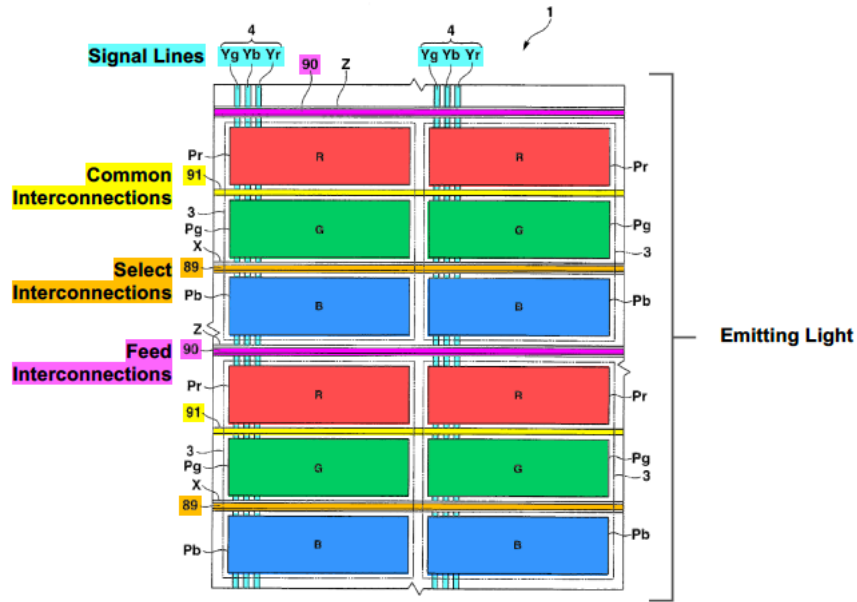
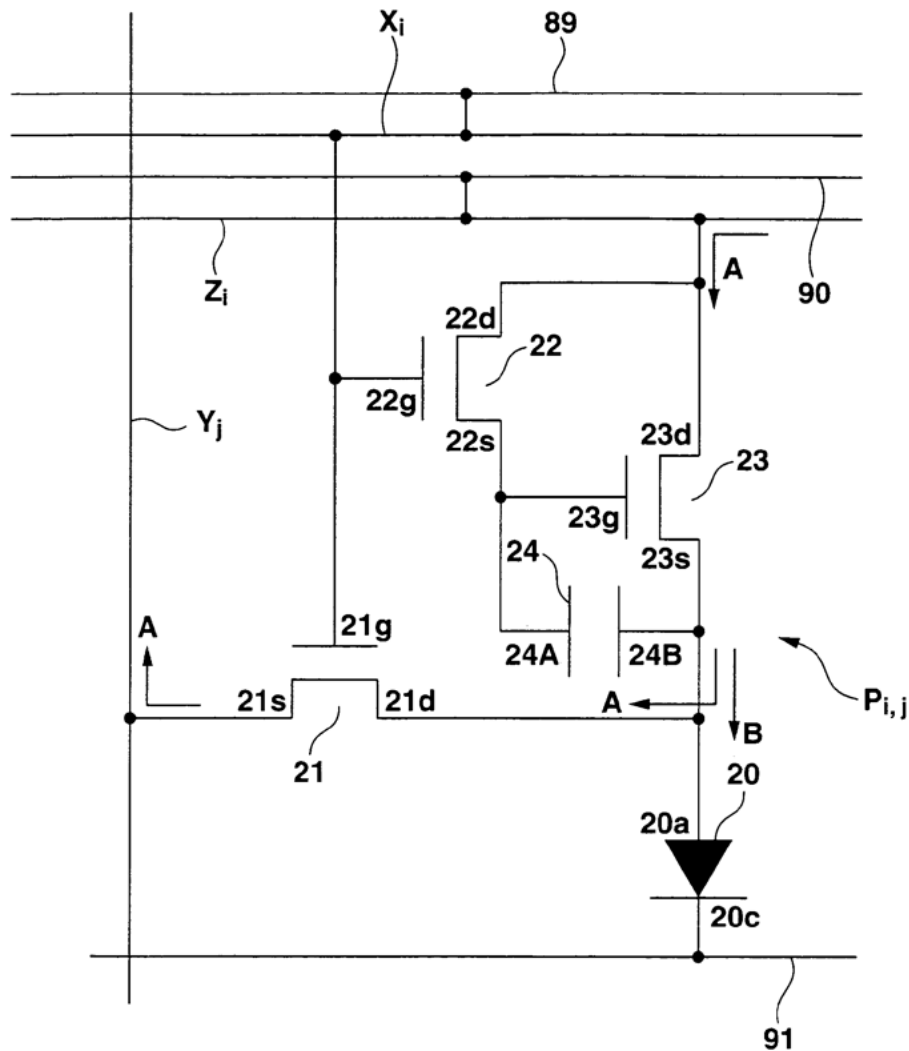


FIG.1

Unlike liquid crystal display technology, which uses a backlight, in OLED or other electroluminescent displays, each individual sub-pixel of the display directly emits light. OLEDs are current-controlled, meaning that the light emitted from each sub-pixel depends on the current that flows through the electroluminescent element in that sub-pixel. As the '338 patent explains, the highest quality OLED displays are “active matrix.” (Ex. 2, '338 patent at 1:19–21.) This means that each sub-pixel in the display has a circuit associated with it, commonly containing electronic components such as transistors and capacitors, which is responsible for sending the correct amount of current through the electroluminescent element and thus controlling the brightness of the sub-pixel. The '338 patent shows an example sub-pixel circuit in Figure 2:



(Ex. 2, '338 patent, Fig. 2.)

transistor on permits a “write current” supplied by the “signal line” Y_i to pass through the circuit, particularly through the driving transistor. (Ex. 2, ’338 patent at 14:59–63.)

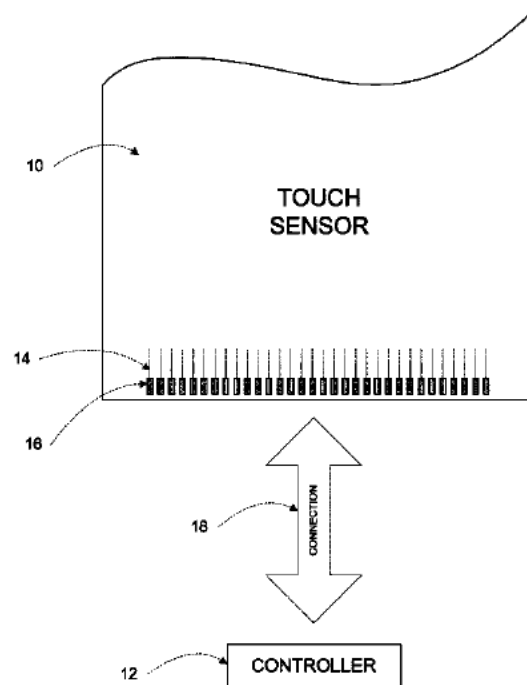
This flow of current causes a corresponding charge to form between the electrodes of the capacitor 24, and when the switch transistor is turned off, a current then flows through diode that depends on the charge on the capacitor, and in this example equals the write current. (Ex. 2, ’338 patent at 15:54–16:13.) The patent specification describes a structure that implements a circuit of this type as a series of thin-film layers in the display panel, and the patent claims aspects of this structure.

B. U.S. Patent No. 9,256,311 (“the ’311 patent”)

The ’311 patent concerns touch sensors for use with display panels, such as those on a mobile phone, tablet, computer or other device. (Ex. 3, ’311 patent at 1:9–23.) There are many different ways that a touch sensor can detect the position of a touch, including by measuring resistance, acoustic waves, and capacitance. (Ex. 3, ’311 patent at 1:24–26.)

Capacitive touch sensors are now the most common sensors used in touch-controlled mobile phones, tablets, and computers. Capacitive sensors detect an object (such as a finger) touching or coming near a surface by measuring the change in capacitance of one or more electrodes that results from the object’s influence on electric fields near the electrodes. These electrodes are commonly formed as patterns in one or more layers of conductive materials on a substrate located in front of the display.

The ’311 patent specification describes touch sensors which are flexible and curve along with the contours of the display of the end device, such as a mobile phone.



It thus teaches (and claims) that the sensors can be wrapped around edges of the display.

III. CLAIM CONSTRUCTION PRINCIPLES

The “claim construction inquiry ... begins and ends in all cases with the actual words of the claim.” *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1324 (Fed. Cir. 2002). Indeed, “the claims themselves provide substantial guidance as to the meaning of [] terms.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314 (Fed. Cir. 2005).

Thus, when conducting a claim construction inquiry, “district courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.” *O2 Micro Int’l v. Beyond Innovation Tech.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008). That is because claim construction is “not an obligatory exercise in redundancy.” *United States Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). Where a term is used in accordance with its plain meaning, the court should not replace it with different language. *Thorner v. Sony Computer*

Ent. Am. LLC, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012) (“we do not redefine words. Only the patentee can do that.”).

To the contrary, there is a “heavy presumption” that claim terms carry their “full ordinary and customary meaning, unless [the accused infringer] can show the patentee expressly relinquished claim scope.” *Epistar Corp. v. ITC*, 566 F.3d 1321, 1334 (Fed. Cir. 2009). Because that plain meaning “is the meaning that the term would have to a [POSITA] in question at the time of the invention,” construing claims often “involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1313-14.

“There are only two exceptions” in which claim terms are not given their full ordinary and customary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner*, 669 F.3d at 1365. Without clear and unambiguous disclaimer or lexicography by the patentee, courts “do not import limitations into claims from examples or embodiments appearing only in a patent’s written description, even when a specification describes very specific embodiments of the invention or even describes only a single embodiment.” *See JWW Enters.*, 424 F.3d at 1335. Similarly, a statement during patent prosecution does not limit the claims unless the statement is a “clear and unambiguous disavowal of claim scope.” *Omega Eng’g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325 (Fed. Cir. 2003)

IV. DISPUTED CONSTRUCTIONS FOR THE PATENTS-IN-SUIT

A. “transistor array substrate” (’338 patent claim 1)

Solas	Samsung
“layered structure upon which or within which a transistor array is fabricated ”	“a layered structure <u>composed of a bottom insulating layer through a topmost layer on whose upper surface electrodes are formed, which contains an array of transistors</u> ”

The parties agree that the claimed “transistor array substrate” is a “layered structure.” The parties also agree that “transistor array” is used according to its plain meaning, as Solas uses the phrase “transistor array” in its proposed construction, and Defendants use the synonymous “array of transistors.”

The central dispute between the parties is whether term as a whole should be construed in accordance with its plain meaning, as in Solas’s proposal, or whether it should be limited to require particular features of a preferred embodiment, as Samsung proposes. Nothing in the specification or other intrinsic record supports limiting this term in the manner Samsung proposes, and Solas’s plain meaning construction should be adopted. (Ex. 1, Flasck Decl., ¶¶ 28–37.)

1. Solas’s proposal is the only proposal consistent with the ordinary and customary meaning of “transistor array substrate.”

The plain meaning of a “transistor array substrate” is the substrate of or for a “transistor array.” The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition (2000) provides a definition of “substrate” in the context of integrated circuits: “(1) (integrated circuit) The supporting material upon or within which an integrated circuit is fabricated or to which an integrated circuit is attached.” (Ex. 4, at 1123, SOLAS_SAMSUNG_0002233.) Samsung’s cited dictionary definition is consistent, stating that a substrate for an integrated circuit may have material placed on it (i.e., “deposited”) or within it (i.e., “inscribed”). (Ex. 5, The New Oxford American Dictionary, Second Edition, at 1688, SDC0068828.) (Ex. 1, Flasck Decl., ¶¶ 30, 39–40.) The ’338 patent uses word “substrate” consistently with these definitions, when it describes the bottom layer “2” in Figure 6 as an “insulating substrate” (Ex. 2, ’338 patent at 10:43):

Samsung’s proposal departs from the plain meaning and incorporates specific features from one of the preferred embodiments disclosed in the specification. Specifically, it requires that the bottom layer of the transistor array substrate be “insulating,” something that is not required by the plain meaning of the term. In particular, Samsung’s dictionary definition states that a substrate could be a silicon wafer, i.e. a semiconductor. (Ex. 5, at 1688, SDC0068828.)

It appears that Samsung may be relying on the statement in the specification that “[t]he layered structure from the insulating substrate **2** to the planarization film **33** is called a transistor array substrate **50**.” (Ex. 2, ’338 patent at 10:45–47.) This is simply a statement that the layered structure from **2** to **33** in Figure 6 is an *example* of a transistor array substrate. It is no more a definition of the term “transistor array substrate” than the statement “the document you are reading is a called an opening claim construction brief” defines or limits “opening claim construction brief.” The statement also clearly does not disclaim other types of “transistor array substrates” other than the type shown in Figure 6. Indeed, the specification is clear that it only describes a

“best mode,” and that “the spirit and scope of the present invention are not limited to the following embodiments and illustrated examples.” (Ex. 2, ’338 patent at 4:42–48.)

Samsung appears to agree that this statement from column 10 is not lexicography, because it does not propose construing “transistor array substrate” as the layers up to a “planarization film.” Instead, it proposes defining “transistor array substrate” in terms of something never mentioned in column 10, lines 42–47, namely in terms of what is formed on the “upper surface” of its “topmost layer.” There is no support in the specification, or elsewhere in the intrinsic or extrinsic record for *defining* the transistor array substrate by something else—having nothing directly to do with the transistor array—that is formed on top of it.

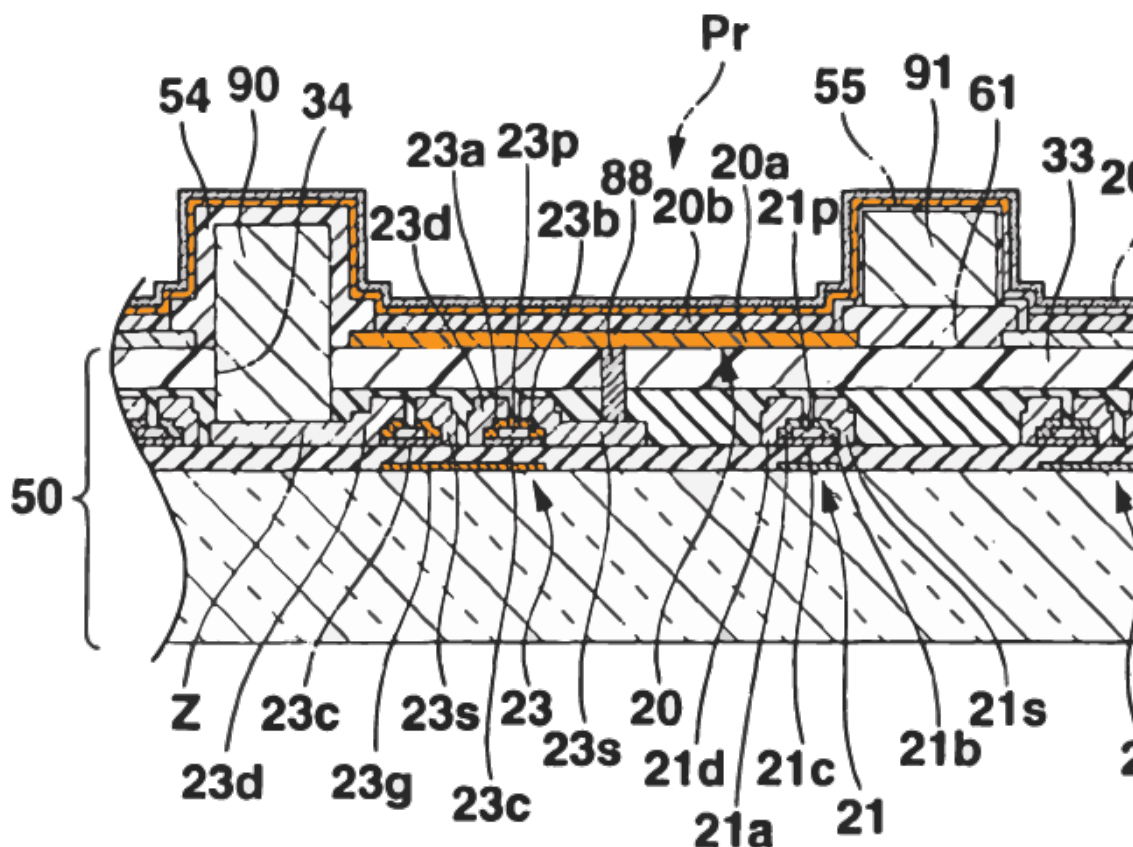
The specification, in describing the Figure 6 preferred embodiment, does describe electrodes as being “arrayed . . . on the upper surface of the planarization film **33**, i.e. the upper surface of the transistor array substrate **50**.” (Ex. 2, ’338 patent at 11:50–52.) It appears that Samsung may be relying on this language in support of its proposal. But, the electrodes are not the only thing that the specification describes as being “on” the transistors array substrate. Indeed, the specification uses very similar language to describe the “insulating line 61,” saying that it is “formed on the surface of the planarization film **33**, i.e., on the surface of the transistor array substrate **50** between the [sub-pixels].” (Ex. 2, ’338 patent at 10:48–51.) If the sentence at 11:50–52 defines the transistor array substrate as the thing the electrodes are formed on, then sentence 10:48–51 defines them as the thing something else is formed on. Correctly understood, the specification is not providing multiple inconsistent *definitions* of transistor array substrate. Rather, it is describing different structures of a preferred embodiment, both of which happen to be formed on the transistor array substrate.

3. Samsung’s redefinition ignores preferred embodiments and introduces unnecessary ambiguities.

Notably, both the sentence at 10:45–47 and the sentence at 11:50–52 form part of the description of a “bottom emission type” embodiment. (Ex. 2, ’338 patent at 10:42–47.) The immediately following paragraphs of the specification describe a “top emission type” embodiment. (Ex. 2, ’338 patent at 11:66–12:5.) In this “top emission” embodiment, an additional “reflecting film having high conductivity and high visible light reflectance” is preferably formed between the sub-pixel electrode 20a and the planarization film 33. (*Id.*) To the extent that Samsung argues that the sentences at 10:45–47 and 11:50–52 are definitional or constitute lexicography, then the sub-pixel electrodes 20a in this “top emission type” embodiment are not formed directly on the upper surface of layer 33, and its proposed construction (requiring that the electrodes be formed on the “upper surface” of the “topmost layer”) improperly excludes this “top emission type” embodiment from the claims. To the extent that Samsung argues that the “transistor array substrate” in the “top emission type” embodiment includes the reflecting film, then its construction is untethered from the statements in 10:45–47 and 11:50–52 stating that the planarization film 33 is the top layer of the transistor array substrate and not supported by anything in the record that supports limiting transistor array substrate in the manner it proposes.

Samsung’s proposal also suffers from a potential ambiguity, even with respect to the Figure 6 embodiment, in that the disclosed and claimed structures have multiple layers of electrodes. For example, claim 1 has “pixel electrodes,” and it also has a “counter electrode” which is stacked on the light-emitting layers, which are formed on the pixel electrodes. (Ex. 2, ’338 patent at 24:22–29.) Looking at the preferred embodiment shown in Figure 6, there are at least four different layers of electrodes. There are the gate electrodes, e.g., 23g, the source and drain electrodes, e.g., 23s and 23d, the sub-pixel electrodes 20a, and the counter electrode 20c. (Ex. 2, ’338 patent at 8:48, 12:21,

13:28, 17:45–46.) To the extent that a construction for this term must map to one and only one structure in this preferred embodiment, Samsung’s proposal fails to do so, as it would cover either layer 2 itself (with the gate electrodes formed on the upper surface), layers 2 through 31 and 23c (with the source and drain electrodes formed on the upper surface), layers 2 through 33 (with the sub-pixel electrodes formed on the upper surface), or all layers below 20c (with the counter electrode formed on the upper surface). These various “electrodes” are highlighted in orange in this enlarged portion of ’338 patent Figure 6:



In summary, there is nothing that Samsung can point to in the specification or the file history that disclaims any forms of “transistor array substrate” or that provides a special definition

or lexicography. As such, there is nothing to overcome the “heavy presumption” that “transistor array substrate” has its “full ordinary and customary meaning.” *Epistar*, 566 F.3d at 1334. Accordingly, Solas’s proposal based on that full ordinary and customary meaning should be adopted.

B. “project from a surface of the transistor array substrate” (’338 patent claim 1)

Solas	Samsung
“extend from a surface of the transistor array substrate”	“extend above the upper surface of the transistor array substrate”

The parties agree that the word “project” is synonymous with “extend,” and both parties retain the phrase “of the transistor array substrate” intact in their proposed constructions. The central dispute is whether the phrase the patentee chose to use in its claims “from a surface” should be rewritten as “above the upper surface,” as Samsung proposes, or should be left intact according to its plain and ordinary meaning, as Solas proposes. *See Thorner*, 669 F.3d at 1366-67 (“we do not redefine words. Only the patentee can do that.”).

“From a surface” has a clear meaning in the context of the claims. (Ex. 1, Flasck Decl., ¶ 43.) Nothing in the intrinsic or extrinsic evidence cited by Samsung in connection with this term uses the word “above,” or requires that the claimed “project[ing]” occur in a specific direction. Samsung’s cited dictionary definition for “project” is “extend outward beyond something else; protrude.” (Ex. 5, *The New Oxford American Dictionary*, Second Edition, at 1355, SDC0068827.) Nothing in this definition suggests that “project from” should be rewritten as “extend *above*.” Samsung’s construction simply replaces a word without any support for doing so. (Ex. 1, Flasck Decl., ¶ 43.)

Samsung’s proposal also replaces “a surface” with “the upper surface.” The claim expressly refers to “a surface,” suggesting there can be more than one. Samsung’s attempt to

narrow the claims specifically to “the upper surface” is without justification and contrary to law. This phrase appears in a limitation that describes a “plurality of interconnections” (Ex. 2, ’338 patent at 24:19–21), and in describing a preferred embodiment, the specification does explain that “the select interconnection **89** and feed interconnection **90** *project upward from the upper surface* of the planarization film **33**.” (Ex. 2, ’338 patent at 11:39–41.) But elsewhere the same specification explains that “the common interconnection **91** . . . is formed to . . . *project upward from the surface* of the planarization film **33**.” (Ex. 2, ’338 patent at 10:54–58.) Even in describing this preferred embodiment, the specification does not always specify that interconnections project from “the upper surface.” More importantly, the references in the specification to “the upper surface” are all in descriptions of preferred embodiments. Nothing in the specification or elsewhere in the intrinsic record limits the claimed “a surface” to a specific “the upper surface.” Likewise, a person of ordinary skill in the art reading these claims in the context of the patent would not understand the claims to limit “a surface” to “the upper surface.” (Ex. 1, Flasck Decl., ¶¶ 43–45.)

Nothing that Samsung can cite to disclaims any of the plain and ordinary scope of “from a surface,” and nothing defines that phrase in any special way. With no evidence to overcome the “heavy presumption” that this term has its “full ordinary and customary meaning,” *Epistar*, 566 F.3d at 1334, Solas’s proposal based on that full ordinary and customary meaning should be adopted.

C. **“the pixel electrodes being arrayed along the interconnections between the interconnections on the surface of the transistor array substrate” (’338 patent claim 1)**

Solas	Samsung
“the pixel electrodes are arrayed along the interconnections and located between the interconnections that are on the surface of the transistor array substrate”	“the pixel electrodes are arrayed along the interconnections and located between the interconnections, and the pixel electrodes are on the surface of the transistor array substrate”

The parties each begin their proposed constructions with the phrase “the pixel electrodes are arrayed along the interconnections and located between the interconnections” and end them with “the surface of the transistor array substrate.” Their dispute concerns what the phrase “on the surface . . .” in the claim term modifies. In Solas’s proposal, “on the surface” modifies the words that appear directly before it: “the interconnections.” In Samsung’s proposal, “on the surface” modifies a more distant phrase “the pixel electrodes.”

Solas’s proposal reflects the most natural interpretation within the context of the claims. An earlier limitation requires “a plurality of interconnections which are formed to project from a surface of the transistor array substrate.” (Ex. 2, ’338 patent at 24:19–21.) The phrase “on the surface of the transistor array substrate” simply refers back to that antecedent basis. It simply makes explicit that “the interconnections” are the interconnections that “project from a surface of the transistor array substrate,” and not some other interconnections that might be present. (Ex. 1, Flasck Decl., ¶ 50.) This interpretation accords with the preference in English to place a propositional phrase next to the thing it modifies, in order to make it easier for the reader to parse the sentence.

The two prior prepositions in the phrase “along” and “between” both modify how the pixel electrodes are “arrayed” in the two dimensions shown in ’338 patent Figure 1:

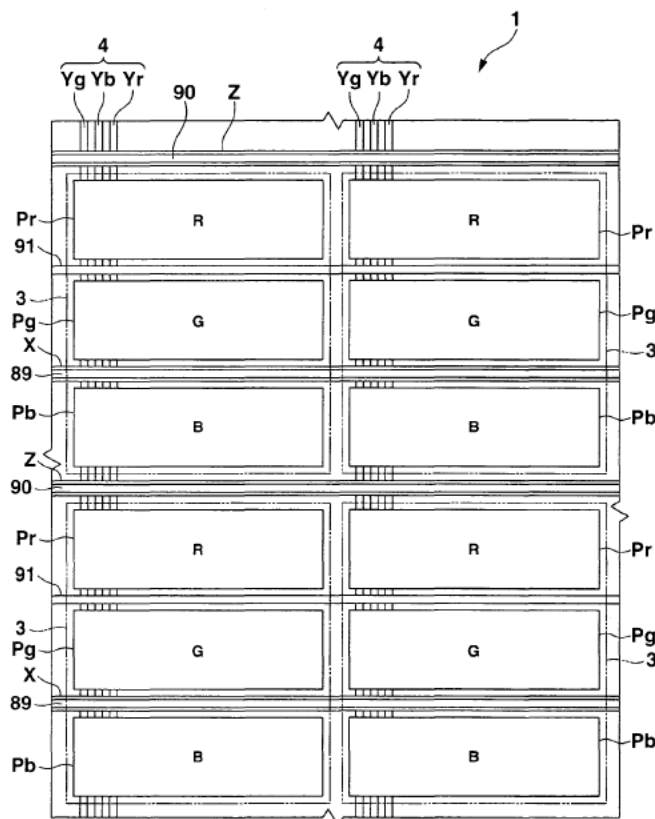


FIG.1

(See '338 patent at 4:53–63.) In contrast, “on the surface” does not modify “arrayed,” which makes it even more unnatural to place it after “arrayed” unless it modifies “interconnections.”

If the patentee had intended “on the surface” to modify “the pixel electrodes,” there are at least three more natural ways to express that. The patentee could have written “the pixel electrodes being arrayed . . . **and** on the surface.” Or, the patentee could have written “the pixel electrodes being on the surface . . . , arrayed along.” Or, the patentee could have modified “pixel electrodes” the first time they are referenced, saying “a plurality of pixel electrodes on the surface . . . for the plurality of pixels, the pixel electrodes being arrayed.” With all of these alternative ways of stating that the “pixel electrodes” are “on the surface,” the fact that the patentee chose to write “the interconnections on the surface . . .” strongly suggests that the patentee meant that it is “the interconnections” that are “on the surface,” and not “the pixel electrodes.”

Solas's interpretation is further supported by an amendment made on February 25, 2008 during the prosecution of the '338 patent. As part of a set of changes that the patentee described as made "to make some minor grammatical improvements and to correct some minor antecedent basis problems," the patentee made the following relevant amendments:

a plurality of interconnections which are formed to project
to from a surface of the transistor array substrate, and which
are arrayed in parallel to each other;

a plurality of pixel electrodes ~~which are provided for the~~
plurality of pixels, respectively, the each pixel electrodes
being and arrayed along the interconnections between the
interconnections on the surface of the transistor array substrate
~~along the interconnections;~~

(Ex. 6, Amendment filed February 25, 2008 at 2, 12.) While many changes were made to the text of this limitation, the words "on the surface" remained adjacent to "the interconnections."

The specification is fully consistent with Solas's proposed construction. For example, in Figure 6, the "select interconnections" 89, "feed interconnections" 90, and "common interconnections" 91 are all shown "on the surface of" the transistor array substrate, as understood by one skilled in the art, reading the claims:

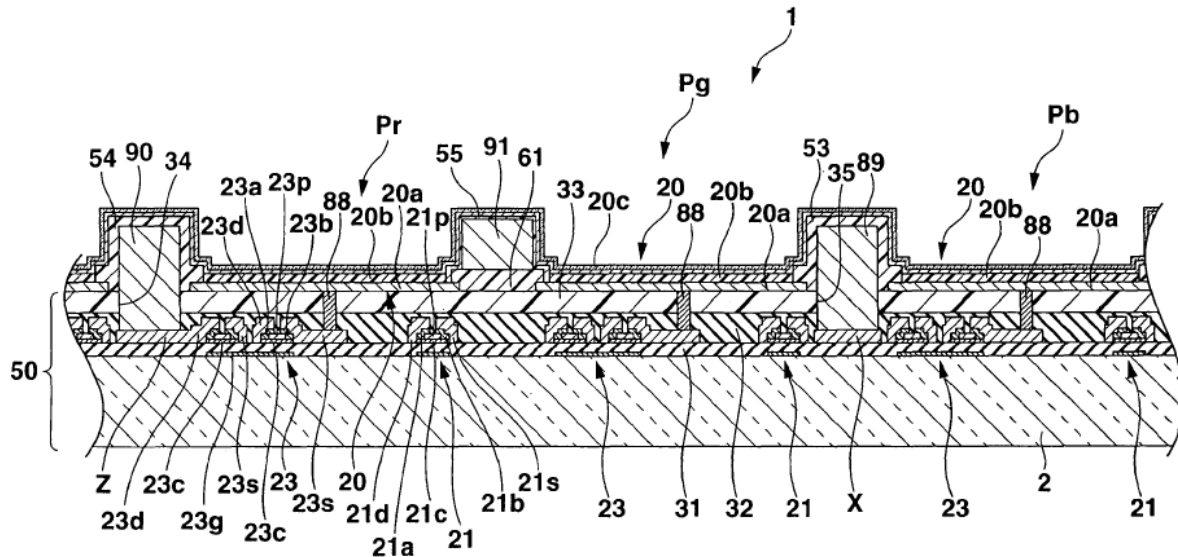


FIG.6

(Ex. 1, Flasck Decl., ¶¶ 56–57.) The specification describes each of these interconnections as “projecting upward from the surface of” the planarization film 33, part of the transistor array substrate 50. (Ex. 2, ’338 patent at 10:54–58, 11:36–41.)

To the extent that Samsung argues that interconnection 91 is not “on the surface of the transistor array substrate,” that argument fails. First, the claims do not require that every single interconnection in the device be “on the surface.” But more importantly, “on” in the context of the patent does not necessarily mean “directly on.” For example, the specification says that the “lower electrode **24A** is *directly formed on* the insulating substrate.” (Ex. 2, ’338 patent at 9:6–7.) The use of “directly” in this instance, but not elsewhere, suggests that “on” can encompass more than “directly on.”

To the extent that “on” must mean “directly on,” then Samsung’s proposal excludes preferred embodiments. As discussed above, the specification describes a “top emission type” embodiment, with a “reflecting film added between the sub-pixel electrode **20a** and planarization

film **33**.” (Ex. 2, ’338 patent at 11:66–12:3.) Here, the claimed “pixel electrodes” are not (directly) “on the surface of the transistor array substrate.”

Samsung’s cited intrinsic evidence outside the specification and its cited extrinsic evidence does not alter the correct construction. For example, Samsung cites to patents 7,573,068 and 7,498,733, which are other patents that share inventors with the ’338 patents and which describe similar preferred embodiments using descriptions that are similar to those of the ’338 patent. But none of those descriptions define the term in dispute or otherwise suggests a meaning different from the plain meaning. (Ex. 1, Flasck Decl., ¶ 60.)

The “claim construction inquiry . . . begins and ends in all cases with the actual words of the claim.” *Teleflex, Inc.*, 299 F.3d at 1324. Solas’s construction is firmly grounded in the words of the claim itself. Nothing that Samsung can cite disclaims the plain meaning of those words or defines them in some way that is particular to the ’338 patent. Solas’s construction is also fully consistent with the preferred embodiments, as disclosed and described in the specification and with the understanding of one skilled in the art. (Ex. 1, Flasck Decl., ¶ 50.) For these reasons, Solas’s proposed construction is the correct construction and should be adopted.

D. “write current” (’338 patent claim 1)

Solas	Samsung
No construction necessary: “ write current ”	“ <u>pull-out current</u> ”

- 1. Based on the one-sided intrinsic and extrinsic evidence, “write current” has a clear plain meaning to one of skill in the art and thus, under controlling law, requires no construction or redefinition**

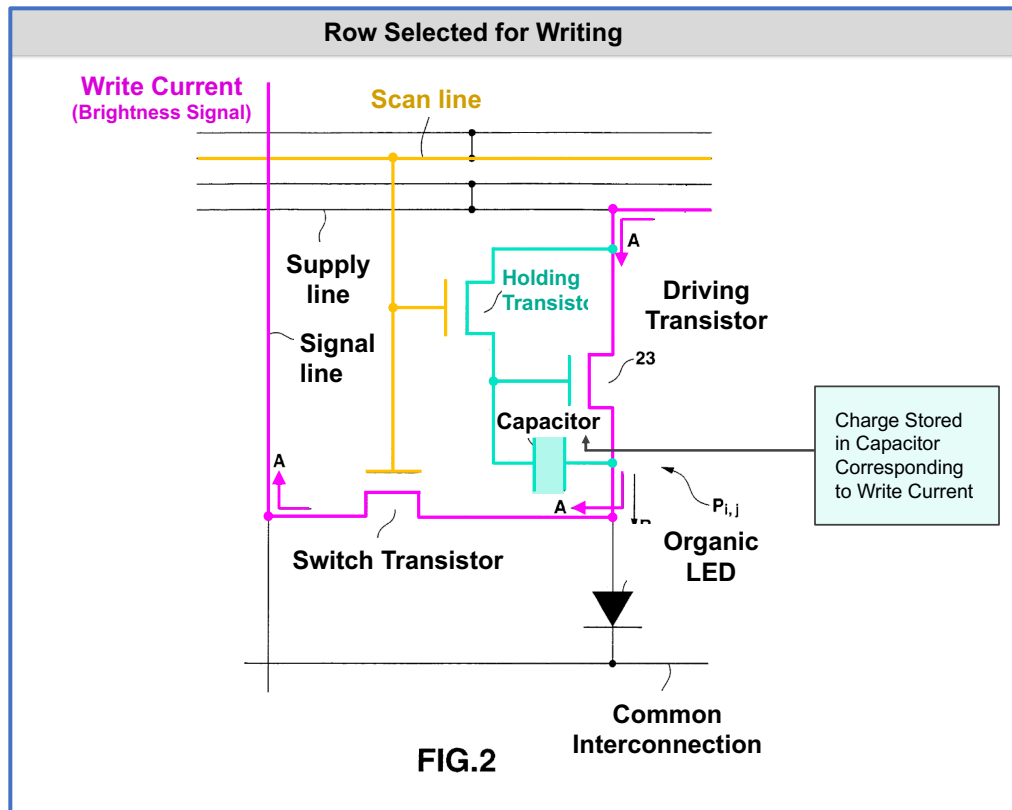
It is hornbook patent law that where a term is used in accordance with its plain meaning to one of skill in the art, the court should not replace it with different language. *Thorner*, 669 F.3d at 1366-67 (“we do not redefine words. Only the patentee can do that.”).

The disputed claim language—“write current”—is precisely the kind of term that has a clear plain meaning on its face. The evidence on this issue is one-sided. As Dr. Flasck explain in his unrebutted opinions, a POSITA reading the claims, specification, and prosecution history would understand the phrase “write current” in the claims to have its plain meaning: a *current that is used to write*. (Ex. 1, Flasck Decl., ¶¶ 61–62.)

The intrinsic record fully supports these points. Beginning with the claims themselves, though they do not need to explain the operation of the “write current,”¹—here, *they actually do*. And this contextual explanation makes clear the term is being used in accordance with its clear plain meaning. Consistent with its plain meaning, claim 1 of the ’338 patent further explains how the “write current” operates, by requiring “a switch transistor which makes a *write current* flow between the drain and the source of the driving transistor.” (Ex. 2, ’338 patent at 24:32–35 (emphasis added).)

The specification supports this point as well. The write current, in the context of the ’338 patent, is used consistently with its plain meaning and is taught in embodiments to be a current that is supplied from outside of the pixel circuit (for example via a signal line) and is used to “write” information, namely how brightly the pixel should emit light, that is stored in the pixel circuit:

¹ *SRI Int’l v. Matsuhita Elec. Corp. of Am.*, 775 F.2d 1107, 1121-22, n. 14 (Fed. Cir. 1985) (*en banc*) (“Specifications teach. Claims claim.”)



(Ex. 2, 338 patent at 15:34–37, 15:43–45, 16:11–13, 17:17–19, 17:59–62.) The term needs no construction.

2. Samsung’s proposed redefinition is inconsistent with the term’s plain meaning and the intrinsic record—and it introduces potential questions where none exist in the claim term itself

The first insurmountable problem that Samsung faces is: in contrast to Solas’s proposal, Samsung has no evidence to show that there is no plain meaning to “write current.” And, also in contrast to Solas’s proposal, Samsung has no evidence to show that the plain meaning of “write current” is “a pull-out current.”

But, Samsung’s next insurmountable problem is: there are only two exceptions” in which claim terms are not given their full ordinary and customary meaning: “1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner*, 669 F.3d at 1365. And

Samsung cannot meet its burden of showing either exception applies to “write current.” Per the intrinsic record and Dr. Flask’s unrebutted opinions on how a POSITA would understand that record, there is no statement of clear disclaimer—implicit or explicit—to change the claim term, “write current,” to “pull-out current.” (Ex. 1, Flasck Decl., ¶¶ 65–66.) And likewise, there is no lexicography. (*Id.*)

Based on its citations to the intrinsic record, Samsung may argue that “write current” should be construed as “pull-out current” because there are several instances in columns 15–17 of the specification that uses the claim term “write current” followed by a parenthetical “(pull-out current),” as in “write current (pull-out current).” However, each of these instances is part of a discussion of a particular example of how *the example circuit in Figure 2* can be driven. (Ex. 2, ’338 patent at 14:40–47, 15:34–37; Ex. 1, Flasck Decl., ¶¶ 64–65.) To be more specific, a POSITA would understand that the “write current” in this example would—in addition to being and achieving the functionality of a “write current”—*separately also* “pulls-out” from the organic LEDs, capacitors and transistors that make up the pixel circuit, depicted below:

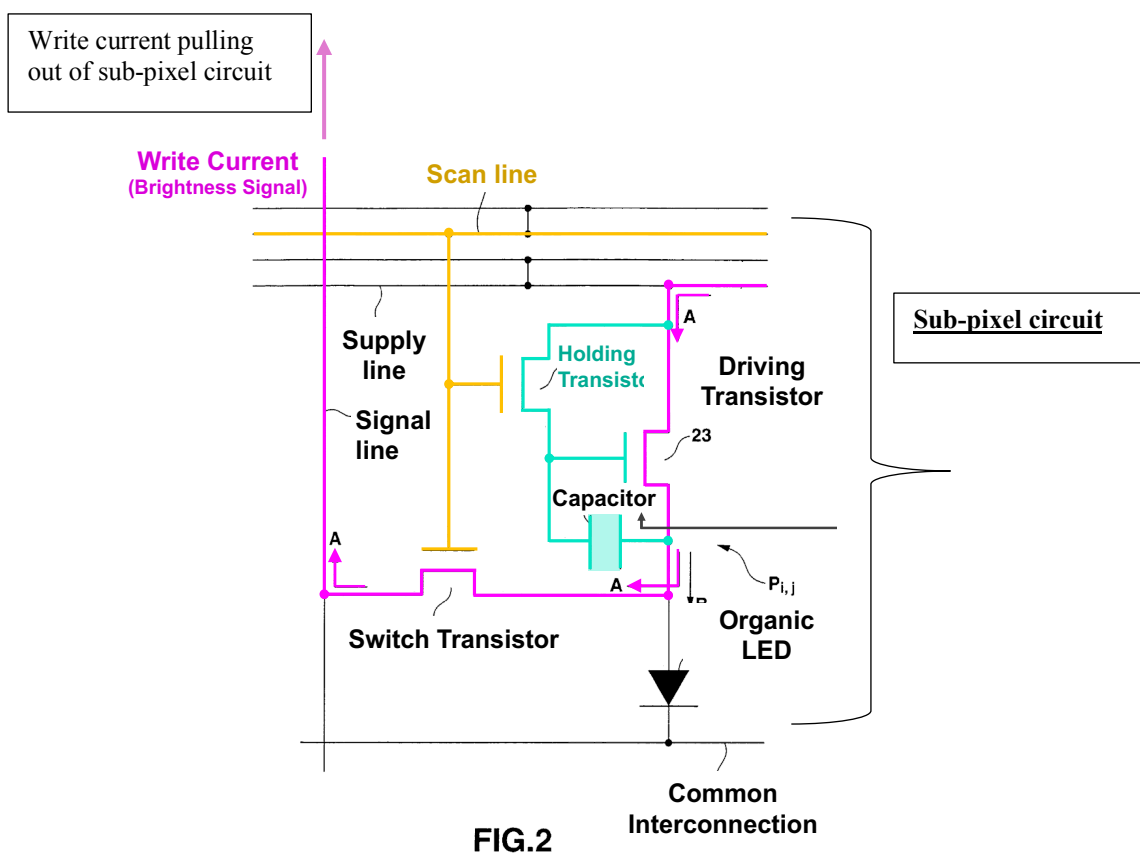


FIG.2

(Ex. 1, Flasck Decl., ¶¶ 21–22.) Thus, a POSITA reading the specification would understand that the “pull-out current” described in connection with Figure 2 is given as an example of a “write current,” and not as a definition or disclaimer of “write current” or a requirement of what the “write current” must be. (Ex. 1, Flasck Decl., ¶¶ 64–65.)

Even if this were the only example provided in the specification, under controlling law, that still would not be enough to effect the change and redefinition that Samsung proposes. That is because courts “do not import limitations into claims from examples or embodiments appearing only in a patent’s written description, even when a specification describes very specific embodiments of the invention *or even describes only a single embodiment.*” *JVW Enters.*, 424

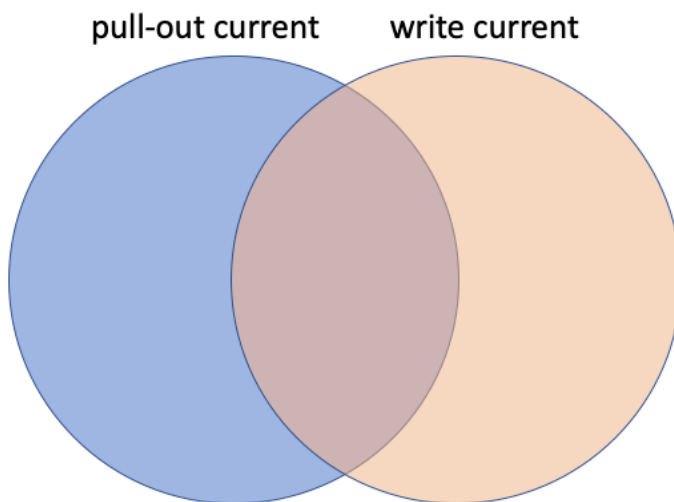
F.3d at 1335 (emphasis added). *Thorner* itself is highly instructive on this particular issue. In *Thorner*, in construing the term “attached,” the Federal Circuit reversed the district court’s order holding that the term required a construction—and that the proper construction required affixing to an “exterior” or “outer” surface. *Thorner*, 669 F.3d at 1367-68. While the court agreed with the accused infringer that “the specification repeatedly uses the term ‘attached’ in reference to embodiments where the actuators are ‘attached to [an] outer side[,]’” that still “does not rise to the level of either lexicography or disavowal”—and this was true despite the fact that “the specification never uses the word ‘attached’ when referring to an actuator located on the interior of a controller.” *Id.* To the contrary, “if the applicant had redefined the term ‘attached’ to mean only ‘attached to an outer surface,’ then it would have been unnecessary to specify that the attachment was ‘to [an] outer surface’ in the specification.” *Id.* And at any rate, simply “disclosing embodiments that all use the term the same way is not sufficient to redefine a claim term.” *Id.*

But here, there are additional reasons for not changing the claim term as Samsung requests, beyond merely those present in *Thorner*, the instances in which write current (pull-out current)” is used **are not** the only embodiment or disclosure of write currents or, separately, pull-out currents. To the contrary, there are **other** disclosures that use **different** words in parentheses following “write current” and, in fact, makes clear that “write current” and “pull-out current” **are not** the same thing or commensurate in scope.

In one noteworthy example, the patentee describes an alternative embodiment with respect to Figure 8 and makes clear that a pull-out current does not have to be the claimed “write current” at all. Instead, in this example, the data driver in this examples “supplies a pull-out current [] **as the write current to all the signal lines ...**” (Ex. 2, ’338 patent at 16:24–27.) (emphasis added). In other words, the data driver supplies or assigns a pull out current to also be the “write current,” but

this is not even some inherent characteristic of the actual claim term, “write current.” And elsewhere, the specification also uses the term “current signal” to further explain exemplary operations of the write current in other examples and embodiments. “write current (current signal)” and “write current (driving current).” (Ex. 2, ’338 patent at 14:60–61, 17:47.)

Thus, the language in the specification surrounding the term “write current” provides additional teachings regarding exemplary structures and operations. (Ex. 1, Flasck Decl., ¶¶ 64–65.) And in light of the variety of language used, there is little to nothing for a POSITA to take away from the instances in which the phrase “write current (pull-out current)” is used to describe exemplary structures in the patent. If there is any certain relationship to glean, then according to the patent specification, at most, *some* “write currents” can *also* “pull out” from the pixel circuit—and *some* “pull-out” circuits can *also* be “write currents,” creating the following illustrative Venn Diagram:



Thus, the patent did not redefine “write current” as a “pull-out current.” If anything, portions of the specification make clear that doing so would create tension, because they are not always the same thing.

Moreover, as Dr. Flasck’s un rebutted testimony shows, a POSITA would not think it was helpful to construe the term “write current” and, even worse, would not understand that “pull-out current” to even accurately describe the meaning of the claimed “write current.” (Ex. 1, Flasck Decl., ¶¶ 62–63.) Instead, redefining the claimed “write current” as a “pull-out current” could only serve to raise additional questions and possible disputes about what the claim terms mean, rather than resolve any. (Ex. 1, Flasck Decl., ¶ 66.)

E. “configured to wrap around one or more edges of a display” (’311 patent claims 1 and 7)

Solas	Samsung
No construction necessary: “configured to wrap around one or more edges of a display”	“wrapped around one or more line segments where two surfaces of a display intersect ”

1. The key disputed term—“edge”—is a clear term with a plain meaning to one of skill in the art and thus, under controlling law, requires no construction or redefinition

For “configured to wrap around one or more edges of a display,” Samsung does not really propose any change or construction at all to the terms “wrap around,” “one or more,” or “display. Instead, as depicted visually above, the parties dispute centers on only one claimed word: “edges.”

While Solas sticks with the simple claimed word chosen by the patentee, Samsung takes a simple and clear terms the patentee chose—“**edges** of a display”—and replaces it with six other words of its choosing, ““**line segments where two surfaces** of a display **intersect**.”

But it is hornbook law than when conducting a claim construction inquiry, “district courts are not (and should not be) required to construe every limitation present in a patent’s asserted claims.” *O2 Micro Int’l* 521 F.3d at 1362. Applying this law to the final “dispute,” the simple term “edges,” really needs no construction. (Ex. 1, Flasck Decl., ¶¶ 67–69, 77.) Per Dr. Flasck, it means the outer limit of an areas or surface. *Id.* And the specification teaches the term in various ways,

consistent with the full scope of its plain meaning. *Id.* This evidence is un rebutted. This creates a “heavy” legal presumption that it should apply. *Epistar Corp.*, 566 F.3d at 1334 (“heavy presumption” that claim terms carry their “full ordinary and customary meaning, unless [the accused infringer] can show the patentee expressly relinquished claim scope.”). Rather, as if often the case, construing this term “involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1313-14.

At any rate, Samsung’s different and far more specific and complex construction does not and cannot disturb that heavy presumption. The term needs no construction.

2. Samsung’s legally erroneous redefinition of the claim term is inconsistent with its plain meaning and appears to limit the term “edges” to only “sharp edges,” that excludes embodiments taught in the specification.

In addition to creating more potential claim-term disputes than it resolves, Samsung’s proposed construction is also inconsistent with the full scope of the plain meaning to a POSITA. Indeed, it appears to limit that plain meaning down to only one specific type of “edge,” namely one that requires “line segments where two surfaces [] intersect.” Accepting this proposal would lead to reversible error, for several reasons.

First, Samsung’s proposal does not comport with the plain meaning of “one or more edges of a display.” (Ex. 1, Flasck Decl., ¶¶ 68–69.) Samsung’s own extrinsic dictionary definitions prove this. (Ex. 7, Concise Oxford English Dictionary at 455, SDC0068915), Samsung’s dictionary definition includes “the outside limit of an object, *area or surface*.” It says nothing about that outside limit of the object, area or surface” also requiring “*line segments where two surfaces ... intersect*.” This is insufficient to overcome the heavy presumption toward the plain meaning of claim term itself. *Epistar Corp.*, 566 F.3d at 1334

Second, nothing in the intrinsic record of the patent gives it any other meaning and certainly does not go nearly as far as Samsung asks this Court to now go in narrowing the meaning of the claimed term “edges.” Again, courts “do not import limitations into claims from examples or embodiments appearing only in a patent’s written description, even when a specification describes very specific embodiments of the invention *or even describes only a single embodiment.*” *JWW Enters.*, 424 F.3d at 1335 (emphasis added). Thus, even if every embodiment fit precisely the construction Samsung now seeks, that would, as a matter of law, be insufficient to construe the term, let alone construe it in a way that departs from its plain meaning.

Third and most critically, we know that every embodiment *does not* fit precisely the construction Samsung now seeks. Far from remaining consistent with the examples in the specification, Samsung’s proposed injection of these limiting terms actually creates tension with embodiments taught in the patent specification.

By seeking its lengthy and specific proposal that requires “***line*** segments” with “***two surfaces ... intersect***,” Samsung’s proposal apparently seeks to limit the claim term “edges,” to only those sharpest of edges, namely, those involving “lines” forming discrete “surfaces,” that also “intersect” at some angle. But this would exclude embodiments that actually are taught. Such constructions are “rarely, if ever” correct. *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1378 (Fed. Cir. 2001) (emphasis added).

For example, in one key teaching involving Figure 7, the patentee explains that the flexible touch-sensitive sensor apparatus may be built to wrap around “sharper edges,” such as those with a radius of curvature of “less than 1mm.” But in providing that very example of “sharper edges” as those with a radius of curvature of “less than 1 mm,” a POSITA would have understood that non-sharper edges—namely, those with a radius of curvature substantially greater than 1mm—

were clearly also within the scope of the patent’s teachings. (Ex. 1, Flasck Decl., ¶ 70.) The patent makes it clear that the two dimensional surface 603 is an edge in some embodiments. This clearly indicates that in the context of the patent, an edge also can be a two dimensional surface. This is also consistent with the Oxford dictionary definition (the outside limit of an object...). And in column 7, the patentee makes clear that these edges may be curved or have various radii. All of these constructions were well-known and accepted by POSITAS at the relevant time period. (Ex. 1, Flasck Decl., ¶ 68.)

Even more squarely to the point of the current dispute, the patentee immediately contrasted this with “*other particular embodiments*,” om which the touch-sensitive sensor may be “wrapped around a *curved surface*.” (Ex. 3, ’311 patent at 7:55–58.) And directly contrary to Samsung’s position now, the patentee then actually made clear that the surfaces do not need to be comprised of “line segments [with] two surfaces [that] intersect.” To the contrary, there can be ““*no substantial distinction between surfaces (such as for example, a pebble-shaped or curved device*,” and far from requiring an “intersection” as Samsung does, it can have “*an angle of deviation between the surfaces of 45 [degrees] or greater*.” (Ex. 3, ’311 patent at 7:60–65.) Put simply, in seeking a construction limited to two surfaces intersecting at one or more line segments,” Samsung’s proposal, however, appears to limit the claim term to edges that are sharper than the scope of what the patent describes as optional embodiments with “sharper edges.” But in so doing, it explains that this is only one embodiment—and limiting “edge” to this embodiment only would read out other edges with “*no substantial distinction between surfaces (such as for example, a pebble-shaped or curved device), an angle of deviation between the surfaces of 45 [degrees] or greater*.”

Samsung, of course, has already acknowledged all of this, albeit before another court. Under the same claim-construction principles we must apply here, Samsung itself acknowledged to the Patent Trial and Appeal Board recently that the phrase “edges of a display” could cover these two types of embodiments:

1. “edges of a display”

First, the ’311 patent does not expressly define what it means to wrap around an “edge of a display.” *It describes* “particular embodiments” in which a touch sensor “may wrap around an edge 603 of example mobile phone 600,” and “*other particular embodiments*” in which the touch sensor is “*wrapped around a curved surface*.” Ex. 1001, 7:55–60 (emphasis added). *It further states that the sensor: may be wrapped* over surfaces that are substantially perpendicular to each other or, *if there is no substantial distinction between surfaces (such as, for example, a pebble-shaped or curved device), and angle of deviation between the surfaces of 45 degrees or greater.*

(Ex. 8, Petition for Inter Partes Review, IPR2019-01668 at 12 (emphasis added).)

The problem with Samsung’s inconsistent positions and contrary construction now is that it effectively excludes what it called the “*other particular embodiments*” it acknowledged at the PTAB. *Id.* (emphasis added). And that narrow construction does not comport at all with the full scope of the plain meaning of the term. These changes distort and improperly narrow the plain meaning of the claims. For example, Respondents’ proposal excludes embodiments taught in the patent, which is “*rarely, if ever*” correct. *Dow Chem. Co. v. Sumitomo Chem. Co.*, 257 F.3d 1364, 1378 (Fed. Cir. 2001) (emphasis added).

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CERTIFICATE OF SERVICE

The undersigned certifies that on February 19, 2020, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system pursuant to Local Rule CV-5(a)(3)(A).

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